



STATE OF WASHINGTON

DEPARTMENT OF AGRICULTURE

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**WASHINGTON STATE
FENAMIPHOS USE SUMMARY**

- The products containing fenamiphos registered for use in Washington State are restricted use pesticides (RUP) and may be purchased and applied by only a certified applicator.
- Fenamiphos is used to control a number of nematode pests. Nematodes can live as parasites on the outside or the inside of a plant. They may be free living or associated with cyst and root-knot formations in plants.
- Fenamiphos is used on a wide variety of plants nationally including fruit, some vegetables, turf and grains. The compound is absorbed by the roots and translocated throughout the plant.
- Fenamiphos blocks the enzyme acetylcholinesterase in the target pest. It also has secondary activity against other invertebrates such as sucking insects and spider mites.
- Fenamiphos is available in emulsifiable concentrate, granular or emulsion formulations. It may also be found in formulations with other pesticides such as carbofuran and disulfoton.
- Fenamiphos is classified toxicity class I - highly toxic. Products containing fenamiphos bear the signal word, "Danger." Fenamiphos belongs to the organophosphate chemical class.
- Fenamiphos is labeled for use on several crops in Washington State. (See table, "Product Names and Labeled Crops" provided below.) With the exception of red raspberries, it is not commonly used.

CROP	WASS* 2001 EST. ACRES PLANTED	EST. % ACRES TREATED	EST. LBS. A.I./ACRE	# OF APPS	EST. ACRES TREATED	EST. LBS. A.I. APPLIED
Red raspberries	9,500	10	3.0	1	950	2850

* Washington Agricultural Statistics Service

MAJOR USES (listed alphabetically):

The major use listing supplies the most commonly used formulations of the active ingredient. No discrimination or endorsement is intended.

The pesticide labels take precedence over any information contained herein. It is the responsibility of the user to comply with the label directions provided.

The following pesticide use summary reflects the general pesticide practices for the listed commodities. The use information is not intended to reflect the pesticide application practices of any individual.

RED RASPBERRIES:

- Seventy-seven percent (77%) of all raspberries grown in Washington State are grown in Whatcom County (6,400 acres). The remaining raspberry acreage is found in Skagit (1,330 acres), Clark (860 acres), Cowlitz (600 acres) and Pierce (110 acres) counties.
- In established fields, fenamiphos (Nemacur 3) may be used in root lesion-infested fields.
- Fenamiphos use has dropped in recent years because bushy dwarf virus has reduced field rotations to 6 – 8 years. Growers do not treat nematodes in fields scheduled to come out the following season.
- Treatment based on the results of soil samples taken in late summer. The economic threshold is 500-root lesion per pint of soil.
- Fenamiphos is applied in the fall (October, November, December) as a liquid so rain will carry it into the soil. Application rate is 3 pounds active ingredient (1 gallon) per acre over the root zone or hill.
- Root lesion-infested fields are usually treated every other year with a single soil application banded in the row between October 1 and December 31. Nemacur has a use cut-off of December 31st and a PHI of 6 months.
- This is the only currently registered nematicide for suppressing root lesion nematodes in established plantings. The 2007 use cut-off has raspberry producers very worried. There are no viable alternatives for suppressing root lesion nematodes in established fields.

PRODUCT NAMES & LABELED CROP:

A complete list of all products currently registered for use in Washington State and their respective labeled crops is attached.

PRODUCT NAME	CROP
NEMACUR 10% TURF NEMATICIDE	GOLF COURSE
NEMACUR 10% TURF NEMATICIDE	INDUSTRIAL SITE
NEMACUR 10% TURF NEMATICIDE	RECREATION AREA
NEMACUR 10% TURF NEMATICIDE	TURF
NEMACUR 15% GRANULAR SYSTEMIC	BRUSSELS SPROUT
NEMACUR 15% GRANULAR SYSTEMIC	CABBAGE
NEMACUR 15% GRANULAR SYSTEMIC	CHINESE CABBAGE

NEMACUR 15% GRANULAR SYSTEMIC	EGGPLANT
NEMACUR 15% GRANULAR SYSTEMIC	GARLIC
NEMACUR 15% GRANULAR SYSTEMIC	OKRA
NEMACUR 15% GRANULAR SYSTEMIC	STRAWBERRY
NEMACUR 15% GRANULAR SYSTEMIC	STRAWBERRY (NON-BEARING)
NEMACUR 15% GRANULAR SYSTEMIC (B)	BRUSSELS SPROUT
NEMACUR 15% GRANULAR SYSTEMIC (B)	CABBAGE
NEMACUR 15% GRANULAR SYSTEMIC (B)	CHINESE CABBAGE
NEMACUR 15% GRANULAR SYSTEMIC (B)	EGGPLANT
NEMACUR 15% GRANULAR SYSTEMIC (B)	GARLIC
NEMACUR 15% GRANULAR SYSTEMIC (B)	OKRA
NEMACUR 15% GRANULAR SYSTEMIC (B)	STRAWBERRY
NEMACUR 15% GRANULAR SYSTEMIC (B)	STRAWBERRY (NON-BEARING)
NEMACUR 3 (SLN: BULB)	BULB
NEMACUR 3 EMULSIFIABLE SYSTEMIC INSECTICIDE-NEMATOCIDE	APPLE
NEMACUR 3 EMULSIFIABLE SYSTEMIC INSECTICIDE-NEMATOCIDE	CHERRY
NEMACUR 3 EMULSIFIABLE SYSTEMIC INSECTICIDE-NEMATOCIDE	EGGPLANT
NEMACUR 3 EMULSIFIABLE SYSTEMIC INSECTICIDE-NEMATOCIDE	GRAPE
NEMACUR 3 EMULSIFIABLE SYSTEMIC INSECTICIDE-NEMATOCIDE	NECTARINE
NEMACUR 3 EMULSIFIABLE SYSTEMIC INSECTICIDE-NEMATOCIDE	PEACH
NEMACUR 3 EMULSIFIABLE SYSTEMIC INSECTICIDE-NEMATOCIDE	RASPBERRY
NEMACUR 3 EMULSIFIABLE SYSTEMIC INSECTICIDE-NEMATOCIDE	STRAWBERRY
NEMACUR 3 EMULSIFIABLE SYSTEMIC INSECTICIDE-NEMATOCIDE (B)	APPLE
NEMACUR 3 EMULSIFIABLE SYSTEMIC INSECTICIDE-NEMATOCIDE (B)	CHERRY
NEMACUR 3 EMULSIFIABLE SYSTEMIC INSECTICIDE-NEMATOCIDE (B)	EGGPLANT
NEMACUR 3 EMULSIFIABLE SYSTEMIC INSECTICIDE-NEMATOCIDE (B)	GRAPE
NEMACUR 3 EMULSIFIABLE SYSTEMIC INSECTICIDE-NEMATOCIDE (B)	NECTARINE
NEMACUR 3 EMULSIFIABLE SYSTEMIC INSECTICIDE-NEMATOCIDE (B)	PEACH
NEMACUR 3 EMULSIFIABLE SYSTEMIC INSECTICIDE-NEMATOCIDE (B)	RASPBERRY
NEMACUR 3 EMULSIFIABLE SYSTEMIC INSECTICIDE-NEMATOCIDE (B)	STRAWBERRY

References:

- 2003 *Farm Chemicals Handbook*, Meister Pro Information Resources
2003 *Pacific Northwest Plant Disease Management Handbook*, Extension Services of OSU, WSU, and UI
2002 *Pest Management Guide for Commercial Small Fruits*, Cooperative Extension, College of Agriculture & Home Economics, Washington State University, EB1491.
2002 *Washington Agricultural Statistics*, Washington Agricultural Statistics Service
2003 Washington State registered pesticide labels

CDMS Label Database: <http://www.cdms.net/manuf/manuf.aspwebsite>
ExToxNet Pesticide Information Profiles: <http://ace.orst.edu/info/extoxnet/pips/pips.html>
Greenbook, Chemical & Pharmaceutical Press Inc.: <http://www.greenbook.net/>
National Agricultural Statistics Service – Agricultural Chemical Use Database: <http://www.pestmanagement.info/nass/>
National Center for Food & Agricultural Policy: <http://www.ncfap.org/database/ingredient/default.asp>
National Pesticide Use Database: <http://www.ncfap.org/database/ingredient/default.asp>
NW Berry and Grape Information Network: <http://berrygrape.orst.edu/>
Pesticide Action Network Pesticide Database: <http://www.pesticideinfo.org/index.html>
U.S. Department of Agriculture National Agricultural Statistics Service: <http://www.usda.gov/nass/>

U.S. Department of Agriculture Pest Management Centers Crop Profiles: <http://www.pmcenters.org/cropprofiles/>
U.S. Department of Agriculture Crop Profiles: <http://pestdata.ncsu.edu/cropprofiles/>
Washington State Pesticide Management Practices: <http://www.tricity.wsu.edu/~cdaniels/wapiap.html>
WSU PICOL Label/Crop Profile Database: <http://picol.cahe.wsu.edu/LabelTolerance.html>

Personal communication – Pete Bristow, WSU Cooperative Extension, Puyallup (raspberries & caneberries)
Personal communication & e-mail – Brian Cieslar, Maberry Farms (raspberries)
Personal communication & e-mail – Tom Peerbolt, Peerbolt Crop Management, Portland, OR (raspberries & caneberries)
Personal communication – various red raspberry and caneberry growers in southwestern Washington